



A LOW POWER CONSUMPTION ANALOGUE OUTPUT ANEMOMETER

In response to demand for an anemometer with an analogue voltage output like the proven Porton Anemometer but with reduced current consumption the type PL4 module from the Porton Anemometer has been developed to produce the LPPL4 resulting in an analogue output anemometer suitable for use with data loggers.

- ▶ **TRIED & TESTED 'PORTON ANEMOMETER' MECHANICS AND ROTOR**
- ▶ **0 TO 2½ V OUTPUT FOR 0 TO 150 KNOTS**
- ▶ **5V PULSE/FREQUENCY OUTPUT, 0 TO 1500HZ = 0 TO 150 KNOTS**
- ▶ **VARIANT A100LPC3L2 INCLUDES ANTI-SURGE PROTECTION OPTION**

Specification Summary:

Range of Operation:	Threshold:	0.3Kts (starting speed: 0.4Kts, stopping speed: 0.2Kts)
	Max. windspeed:	150Kts (75m/s)
	Standard measuring range:	0 to 150 Knots
Rotor:	Type:	R30, 3-cup rotor.
	Distance Constant:	2.3m ±10%
Pulse Output:	Rotor speed measurement:	By interruption of optical beam.
	Accuracy:	1% of reading (20 - 110Kts), up to 2% of reading (110 - 150Kts) 0.2Kts (0.2 - 20Kts).
	Non-linearity:	0.4% full range output frequency (correction curve supplied).
	Output Range:	0 to 1500Hz for 0 to 150Knots (10Hz per Knot)
	Resolution:	5.15cm.
	5V pulse output:	High 5V±5%, Low <0.2v, min. load res: 20K Ohms. Rise/Fall time approx. 25us, duty cycle 50%(±25%)
Analogue Output:	Nominal Factory Calibration:	0 to 2.500 V DC for 0 to 150 Knots single ended (16.67mV per Knot).
	Output Over-range:	5V ±10%
	Overall Non-linearity:	0.9% full range output for 0 to 150Knots (correction curve supplied for rotor+ratemeter).
	Temperature Coefficient:	±2% of output relative to 15°C value (-30 to +40°C)
	Response Time:	150ms first order lag typical (as Porton A100)
	Effect of supply variation:	±0.2% full range output over full supply range.
	Output Ripple:	Typically 13mV peak to peak at pulse frequency.
	Output Resistance:	Less than 500 Ohms.
	Recommended load resistance:	1M Ohm for calibrated output, (otherwise minimum 5K Ohms).
General:	Operating Temperature Range:	-30 to +70 °C
	Supply Voltage:	6½V to 28V DC
	Power-up Time:	5 sec.
	Current consumption:	2mA max, 1.6mA typical (no output loads).
	Standard Cable:	3m long, 6 core screened 7/0.2mm, PVC insulated.
Connections:	Red = Supply positive, Blue = Supply negative, Green = Analogue output +, Yellow = Analogue output - (Yellow is connected to Blue in the instrument permitting correction for zero offset caused by supply current in long cables), White = Pulse output, Black = Base plate, Screen = Not connected at anemometer.	
Calibration:	Calibration data for the anemometer and rotor are provided at one test speed to an accuracy of 1% at +15°C and +12V DC supply, with analogue output load = 1M Ohm. In-service calibrate/test facility is not fitted.	
Anti-surge options:	A100LPC3L2 variant has an extra surge protection module containing series resistance elements and clamping devices fitted to the base of the module in the standard anemometers. Note that these protection elements slightly affect certain specification parameters.	
Mechanical:	Dimensions, mm / Weight:	195 height x 152 rotor diameter x 55 body diameter. Net Weight: 490g.
	Mounting:	0.25 inch BSW/UNC screw into base (standard tripod fitting).

(Vector Instruments reserves the right to change this specification without notice in line with a policy of continued product improvement)